

Governing Bioeconomy Pathways - Eastern Africa

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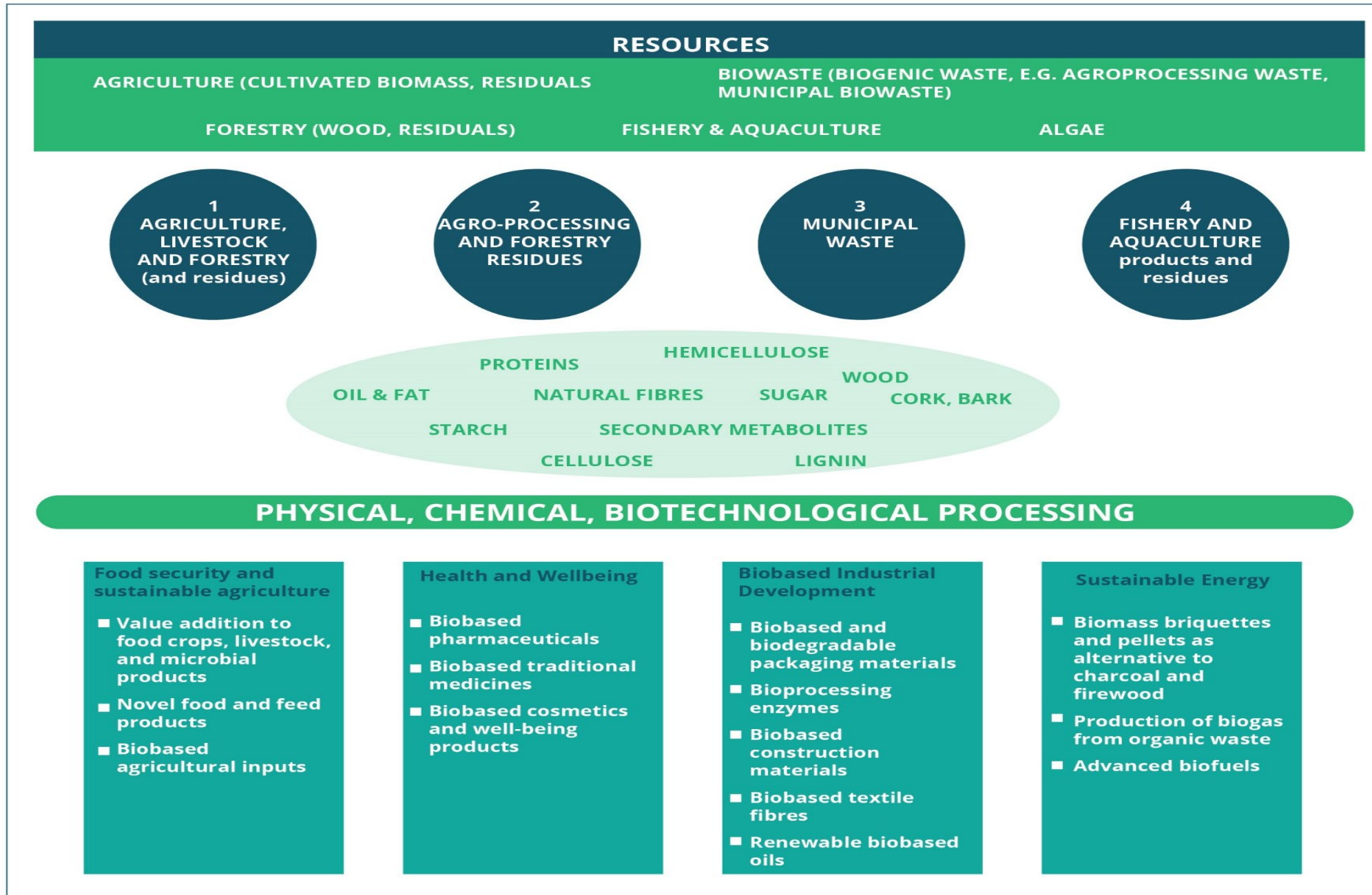
■ East African Community Partner States

EAST AFRICAN COMMUNITY

-  Democratic Republic of the Congo
-  Republic of Burundi
-  Republic of Kenya
-  Republic of Rwanda
-  Republic of South Sudan
-  Republic of Uganda
-  United Republic of Tanzania



Modern biosciences opens new frontiers for bioresource value addition...



What a modern bioeconomy can bring to the region....



Sustainable industrialization, job creation and green growth



Improved food security-connecting smallholders to market and value chains



Improved health- using biodiversity in the region to develop biobased health and pharmaceutical products



New biobased products, including biomaterials for construction, bio-inputs for agriculture, enzymes for industry, and biobased feedstocks (e.g. biofertilisers, bio-packaging)



Creating new forms of clean sustainable modern bioenergy, such as biofuels, mitigating climate change and massive use of woodfuel that leads to deforestation.



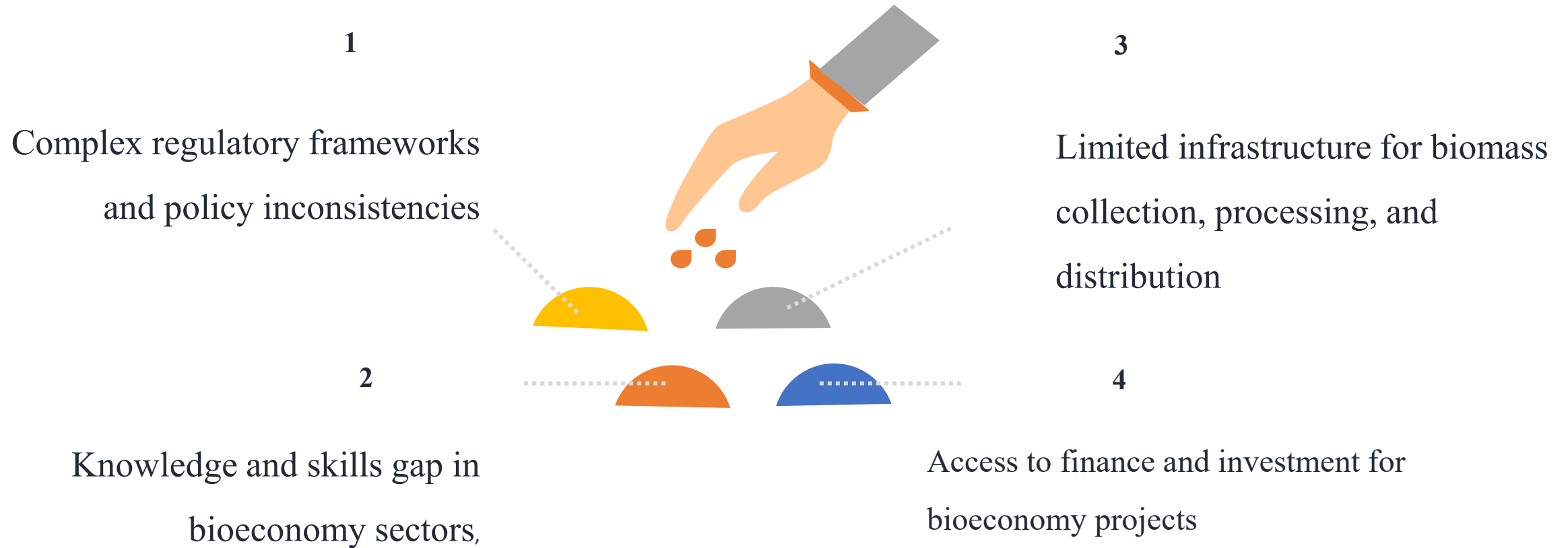
Protecting the environment through converting waste, which today threatens ecosystems and freshwater resources, to useful products.

The Bioeconomy in the region is today working in an inoptimal manner.....

- Very low level of value addition to primary produce
- Limited use of agricultural/bio waste and biomass residues
- Inefficient biomass value chains



Challenges to Overcome



Encouragingly, there are new initiatives in the region....

- The EAC Regional Bioeconomy Strategy (2022 – 2032)
- New emerging initiatives/actors in the region, e.g.
BioinnovateAfrica
- New emerging East African bioeconomy small, medium and micro-enterprises (SMEs)

The East African Regional Bioeconomy Strategy



Strategic Thematic Area 1:



Food security and sustainable agriculture :

- Value addition to food crops, livestock, forestry, marine and aquatic resources and microbial products
- Novel food and feed products
- Biobased agricultural inputs

Strategic Thematic Area 2:



Health and Wellbeing

- Biobased pharmaceuticals.
- Biobased traditional medicines
- Biobased cosmetics and well-being products

Strategic Thematic Area 3:



Biobased Industrial Development

- Biobased and biodegradable packaging materials
- Bioprocessing enzymes
- Biobased construction materials
- Biobased textile fibres
- Renewable biobased oils

Strategic Thematic Area 4:



Sustainable Energy :

- Biomass briquettes and pellets as alternative to charcoal and firewood
- Production of biogas from organic waste
- Advanced biofuels

Summary of bioeconomy policy development in countries in Eastern Africa

Country	Has a dedicated Bioeconomy policy/strategy	Is developing a dedicated Bioeconomy policy/strategy	Has a Science, Technology and Innovation Policy/Strategy
Burundi	No	No	No
Ethiopia	No	Yes	Yes
Kenya	No	No	Yes
Rwanda	No	Yes	Yes
South Sudan	No	No	Draft policy
Tanzania	No	No	Yes
Uganda	No	Yes	Yes

New emerging East African bioeconomy SMEs



Almi Foods Manufacturing PLC,
Ethiopia



Sorghum malt drink in Uganda



Real IPM, EA- **Modern
biocontrol/biological agents
improving farm productivity**

Renewable energy and biofuel production

Bioethanol production

Converting aquatic weed into a renewable and cleaner-burning fuel.



Biogas Production

Converting organic waste, such as agricultural residues and livestock manure, into biogas for cooking, heating, and electricity generation



Three billion people globally cook over smoky open fires or on stoves using kerosene, wood, charcoal, dung or coal. The practice leads to more than **4 million deaths** annually, amounting to a higher mortality rate than malaria, HIV, and tuberculosis combined. Dirty cooking fuels also contribute to climate change, lead to the loss of economic opportunities, and they are a particular burden on the health and time of women (WHO, 2020)

New emerging East African bioeconomy SMEs



Biobuu Limited in Kenya and Tanzania- Produce **high protein chicken and fish and poultry feed** well as organic compost from **growing black soldier flies**. Transform waste into high-value insect protein for animal feed and compost



Hya Bioplastics in Uganda

- Produces **biodegradable food packaging**, using plant fibres such as **maize husks, sugar cane bagasse** and **water hyacinth**.
- Replacing existing petroleum-derived disposable packaging with bio- degradable ones



Mwani Zanzibar farms and processes **seaweed**, turning it into **cosmetics and skincare products**

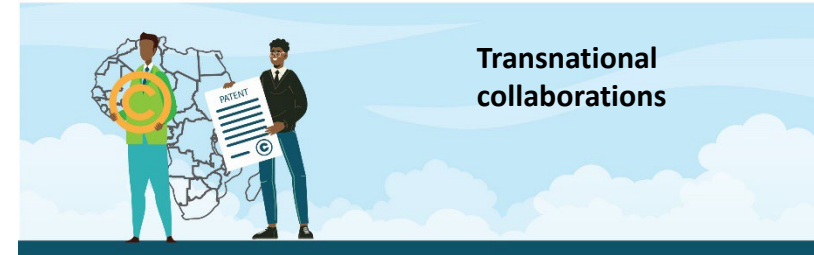
New emerging East African bioeconomy SMEs



Banana Investment Limited (BIL), Arusha. ***Using agrowaste to optimize processing and to develop useful products***

Cassava Processing: Process cassava flour, starch, ethanol, and high-quality animal feed

Creating an Enabling Environment



Way Forward

- **A bioeconomy index** that would be used to measure how countries/regions are progressing but also to capture what changes are needed in terms of policies, resource mobilization etc.
- **Innovative capacity building** of the young people with strong interest in bioeconomy development.
- **Social inclusion** approaches in the implementation of bioeconomy solutions
- **Synergistic innovations and consolidating resources** in the centers of excellence to avoid wastage
- **Policies that seek to strengthen transnational innovations** either at institutional, programme and government levels. Develop cross border joint research and innovations policies that fosters cross border learning and sharing

Thank You

